Bachelor of Science in Geospatial Information Sciences

Geospatial information sciences (GISc) harness groundbreaking technologies for Spatial Big Data Analytics that make location and interaction key to our understanding of social and environmental dynamics. GISc graduates will master the knowledge and skills to spatially integrate data and computing resources for informed evidence-based decision making in environmental modeling, business intelligence, precision agriculture, smart cities, public safety, and community resilience, just to name a few.

Recent technological innovations have greatly enhanced our ability to collect and analyze massive environmental, social, and economic data about places as well as location data about individuals. Now more than ever before, unmanned aviation vehicles (UAV) equipped remote sensors provide near-real time imagery for search, rescue and damage assessment after a disaster. Lidar data clouds enable us to build high resolution 3D models of buildings, trees, and terrains. Location-based services and mobile geospatial apps allow us to search information based on proximity to our locations (e.g. find nearby restaurants) and connect our social networks in both physical and cyber spaces (e.g. Foursquare checks).

From Microsoft and Apple to Google, and from the United Nations to indigenous communities, geospatial information science and technologies play an essential role for social-environmental inventory, planning, and forecasting of food, water, energy, and health. These technologies include geographic information systems (GIS), the Global Positioning System (GPS) and satellite-based remote sensing. They penetrate virtually every aspect of our lives, from digital maps in cars to the maintenance of city infrastructure, regional agriculture and forest lands.

GIS has revolutionized traditional disciplines such as geography and inspired scientists from a broad range of fields to combine efforts on leading-edge research.

Careers in Geospatial Information Sciences

GISc graduates will encounter a wide variety of career options, as businesses and governments race to take advantage of technological advances. If they wish to enter the public sector, they may work in areas such as public administration and policy analysis; public safety, criminology and emergency preparedness management; geospatial intelligence; environmental management; or urban, regional, social service and transportation planning.

Businesses also recruit GISc graduates, especially companies focused on marketing; site selection, logistics and real estate; resource exploration (including petroleum) and others.

Students who graduate with a BS also may move on to graduate school, perhaps entering UT Dallas’ highly regarded MS or PhD geospatial programs, which were recently ranked in the top 5 in the nation. The University’s Career Center is an important resource for students pursuing their career. Licensed counselors are available to provide strategies for mastering job interviews, writing professional cover letters and resumes and help students connect with campus recruiters, among other services.

Geospatial Information Sciences at UT Dallas

The general BS degree requires 120 hours to graduate: 42 hours from the University’s core curriculum, 42 hours from the major, and 36 semester credit hours of electives.

Fast-Track

UT Dallas undergraduates who meet the requirements for admission to graduate school and have at least a 3.25 UT Dallas cumulative GPA should consider the Fast-Track option. Fast-Track allows students to take up to 15 credit hours of graduate courses their senior year that can be applied toward both their bachelor’s degree and a master’s degree. Students who successfully complete the Fast-Track requirements are not required to take the Graduate Record Exam (GRE) before entering the master’s program.
Every new generation inherits a world more complex than that of its predecessors, which prompts a need for new thinking about public policies that impact people’s daily lives. While our colleagues in the Naveen Jindal School of Management or the Erik Jonsson School of Engineering and Computer Science are creating new managerial or technological systems, we in the School of Economic, Political and Policy Sciences (EPPS) examine the implications of innovation and change for individuals and communities.

As an undergraduate in EPPS, you will have the opportunity to work with professors who are probing issues that will affect your future. You will develop the vital skills you need to thrive in a rapidly evolving, highly competitive job market. EPPS will prepare you for careers in government, non-profits and the private sector that enable you to make a real difference in the world of today and tomorrow.

EPPS is at the forefront of leadership, ethics and innovation in the public and nonprofit sectors. Our students and faculty look forward to new opportunities to study and address the complex and evolving issues of the future.

Research informs much of the instruction. The school has seven centers of excellence:

- Center for Crime and Justice Studies
- Center for Global Collective Action
- Center for the Study of Texas Politics
- Institute of Public Affairs
- Institute for Urban Policy Research
- Texas Schools Project
- The Negotiations Center

### Degrees Offered

**Bachelor of Science and Bachelor of Arts:** Criminology, economics, geospatial information sciences, international political economy, political science, public affairs, sociology

**Master of Science:** Applied sociology, criminology, economics, geospatial information sciences, international political economy, justice administration and leadership

**Master of Arts:** Political science, political science-constitutional law studies, political science-legislative studies

**Master of Public Affairs:** Public affairs

**Master of Public Policy:** Public policy

**Doctor of Philosophy:** Criminology, economics, geospatial information sciences, political science, public affairs, public policy and political economy

### Certificates

EPPS offers the following graduate certificates, which generally can be completed in one year of part-time evening classes:

- Geographic Information Systems (GISc): a 15-hour graduate-level certificate focusing on the application of GIS in government, private sector and scientific areas, which can be completed in one year of part-time evening classes.
- Remote Sensing: a 15-hour for-credit graduate certificate focusing on remote sensing and digital image processing, which can be completed in one year of part-time evening study.
- Geospatial Intelligence: a 15-hour graduate certificate focusing on the application of geospatial ideas and techniques to national security and other intelligence activity.
- Local Government Management: a 15-hour graduate certificate focusing on the application of geospatial ideas and techniques to national security and other intelligence activity.
- Nonprofit Management: a 15-hour graduate certificate designed to provide an overview of the nature and context of nonprofit organizations and develop competencies needed by nonprofit managers.

### Contact Information

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